Heart Disease and Stroke

For more information about CDC's cardiovascular health program, visit http://www.cdc.gov/nccdphp/cvh/index.htm

Arkansas

Implementing Cardiovascular Disease Guidelines for Physicians and Patients to Improve Health Outcomes

Public Health Problem

Cardiovascular disease (CVD), mainly heart disease and stroke, is the leading cause of death in Arkansas. The state ranks fifth in the country in deaths from heart disease and second in deaths from stroke. The increased burden of disease in Arkansas compared with the rest of the United States may be partially explained by the higher rates of cardiovascular risk factors among state residents. Behavioral Risk Factor Surveillance System (BRFSS) 1999 data indicate that more people in Arkansas than those in the general U.S. population have high blood pressure (28% vs. 24%), smoke cigarettes (25% vs. 22%), and are completely physically inactive (28% vs. 27%).

Evidence That Prevention Works

Compelling evidence from recent clinical trials supports the merits of aggressive risk reduction therapies for patients with CVD. The American Heart Association and the American College of Cardiology urge all health care settings where CVD patients are treated to develop specific protocols and procedures reminding health care providers to implement the guidelines and assess the success of appropriate treatments.

Program Example

The Arkansas Wellness Coalition (AWC) is a nonprofit voluntary organization composed of partners interested in improving health outcomes for Arkansans. Member organizations include the American Heart Association (AHA), managed care organizations, the Arkansas Department of Health Diabetes Prevention and Control and Cardiovascular Disease Programs, the Arkansas Quality Improvement Organization, pharmaceutical companies, Arkansas Medicaid, and the University of Arkansas for Medical Sciences. The Coalition's purpose is to improve the health and well-being of all Arkansans through the implementation of nationally recognized peer-reviewed guidelines for physicians and patient self-management. AWC works to coordinate efforts between health care providers and advocacy organizations to improve quality of care and health outcomes in targeted diseases, enhance consistency and efficiency of care by providing common core principles, and implement recognized standards of care. These efforts provide physicians throughout the state with the AHA guidelines and strategies for providing appropriate high blood pressure and high cholesterol treatment and follow-up care.

Implications

This program demonstrates the importance of disseminating and implementing recognized guidelines for the primary and secondary prevention of CVD by applying health systems. A guidelines-based approach can result in better outcomes for patients by applying recognized prevention and treatment standards, which help ensure improved quality of life and reduced risk for initial and recurrent heart attacks and strokes.

Contact Information

Arkansas Department of Health
4815 W. Markham Street, Slot 3 • Little Rock, Arkansas 72205
Phone: (501) 661-2677 • Web site: http://www.healthyarkansas.com

Maine

Addressing Secondary Prevention Through Health Care Provider Workshops

Public Health Problem

Cardiovascular disease (CVD), mainly heart disease and stroke, is the leading cause of death for both men and women in Maine. In 2000, $437 million was spent for cardiovascular-related hospital charges in Maine, which is about one-fourth of all hospital charges.

Evidence That Prevention Works

Compelling evidence supports aggressive therapies for patients with CVD. The American Heart Association and American College of Cardiology urge medical care settings where CVD patients are treated to develop a specific plan to identify high-risk patients, apply the guidelines, and assess the success of appropriate treatments.

Program Example

Supported by CDC, the Cardiovascular Health (CVH) Program in the Maine Department of Human Services, Bureau of Health, collaborates with the Maine Cardiovascular Health Council (MCHC) and the American Heart Association New England affiliate to improve secondary prevention. The CVH program and the American Heart Association provide regular training for health care providers. The American Heart Association hospital quality assurance program, "Get With the Guidelines," is being conducted. The CVH program collaborates with the American Heart Association and the American Hospital Association to implement prevention guidelines for patients discharged from hospitals. The Maine Taskforce on Cardiovascular Disease Prevention, the medical advisory arm of the CVH Program, implemented a system of enrolling patients in cardiac rehabilitation programs. Another partner, the Maine Cares Coalition, a network of provider-sponsored community-based support programs, is working to ensure that treatment for patients with coronary heart disease and congestive heart failure follows national guidelines.

Implications

This program demonstrates the importance of implementing recognized guidelines for the primary and secondary prevention of heart disease and stroke, which lead to fewer deaths following heart attacks and strokes. In Maine, statewide improvements have already been documented in the increased use of lipid lowering medication and reductions in patient cholesterol levels.

Contact Information

Maine State Bureau of Health
11 State House Station, Key Plaza • 286 Water Street • Augusta, Maine 04333
Phone: (207) 287-8016 • Web site: http://www.state.me.us/dhs/boh

Missouri

Partnering With Community Health Care Centers to Prevent Heart Attacks and Strokes

Public Health Problem

Missouri has some of the highest rates of cardiovascular disease (CVD), mainly heart disease and stroke, in the country. It ranks second in the nation in deaths from coronary heart disease. Between 1990 and 1997, heart disease and stroke claimed 174,640 lives in Missouri, and in 1997, CVD accounted for 42% of all deaths. In 2000, Missouri had 210,735 hospitalizations attributed to heart disease and stroke, with direct medical costs exceeding $3 billion.

Evidence That Prevention Works

Preventable complications and deaths associated with CVD can be reduced if guidelines for standards of care are implemented. Effective management of hypertension results in highly significant reductions in premature death and disability from heart disease and stroke. Results from large-scale trials show that a 5 mm Hg reduction in diastolic blood pressure corresponds to a 21% reduction in heart disease risk. The recognition of stroke symptoms, use of the 9-1-1 Emergency Medical Systems, timely arrival at hospitals, and prompt treatment result in significantly improved outcomes for stroke victims.

Program Example

The Missouri Cardiovascular Health (CVH) Program is partnering with the Missouri Diabetes Prevention and Control Program and Federally Qualified Health Centers (FQHCs) to administer and evaluate a new comprehensive approach to improving standards of care for patients with CVD, diabetes, and hypertension. The partners are implementing a registry that will store clinical patient data, making it possible to aggressively follow-up on and monitor FQHC patients. The FQHCs offer a unique opportunity to reach Missouri's high-risk minority and low-income populations, many of whom live in rural areas. In 2001, 184,712 Missourians used FQHCs as their primary source of health care. Additionally, the Missouri CVH program is collaborating with the Missouri Patient Care Review Foundation, the American Heart Association (AHA), and the Missouri Hospital Association to promote AHA's updated guidelines for the primary and secondary prevention of CVD. This approach is being carried out by working with health care systems, medical schools, and insurance organizations.

Implications

This program demonstrates that populations benefit when states provide leadership and collaborate at the community level with organizations that provide, monitor, and pay for primary and secondary prevention services. State participation in the Cardiovascular Health Collaborative with FQHCs will enhance efforts to aggressively prevent heart disease and stroke, reduce health disparities, and increase access to quality care in these health care settings.

Contact Information

Missouri Department of Health • Division of Chronic Disease Prevention and Health Promotion
920 Wildwood Drive • P.O. Box 570 • Jefferson City, Missouri 65102-0570
Phone: (573) 522-2800 • Web site: www.health.state.mo.us

North Carolina

Influencing Environmental and Policy Changes in the Stroke Buckle States

Public Health Problem

Stroke is the third leading cause of death in the United States. States in the Stroke Belt (North Carolina, South Carolina, Georgia, Alabama, Mississippi, Arkansas, Tennessee, and Louisiana) have higher stroke death rates than the rest of the country. Significantly higher rates occur in North Carolina, South Carolina, and Georgia, which make up the Stroke Belt Buckle. Many adults do not know the signs and symptoms of stroke and do not take immediate action. Lack of awareness and prompt response often result in stroke-related death and disability; only 26% of Americans can name the most commonly recognized warning sign of a stroke.

Evidence That Prevention Works

Prevention of stroke disability and death is the best way to reduce the burden of this public health problem. Stroke prevention should include education on the signs and symptoms of stroke, of the need for emergency response (i.e., calling 9-1-1), and about stroke risk factors (high blood pressure, high cholesterol, diabetes, obesity) and lifestyle changes (quitting smoking, increasing physical activity) that can reduce stroke risk.

Program Example

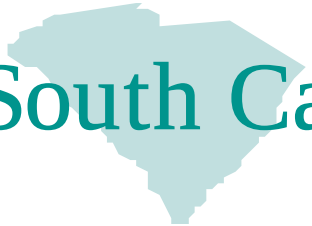
North Carolina, South Carolina, and Georgia formed the Tri-State Stroke Network in 2001. Consisting of 27 members from private and public sectors, the Network strives to increase public awareness of stroke signs and symptoms and when to call 9-1-1, and to enhance the treatment of stroke as a medical emergency. With the establishment of the Network, the three states support system enhancements by sharing limited resources and collaborating on stroke issues. With the addition of new partners, the Network is strengthening its capacity to address the excess burden of stroke in the Stroke Belt region. The Network has increased awareness of the stroke burden among state and local organizations, assessed the reasons for excess in stroke deaths, and examined priority strategies, regulations, and programs to improve stroke prevention. Because of the success of the Tri-State Stroke Network, CDC has funded additional states in the Stroke Belt to implement similar networks.

Implications

This program demonstrates that state health departments are in a position to influence environmental and policy changes within their states by partnering with Emergency Medical System staff to promote statewide availability of 9-1-1, by increasing awareness of the American Heart Association guidelines on stroke signs and symptoms, and by implementing regional stroke networks with other states to share prevention strategies, resources, and partnership opportunities.

Contact Information

North Carolina Department of Health and Human Services • Cardiovascular Health Unit
1915 Mail Service Center • Raleigh, North Carolina 27699-1915
Phone: (919) 715-3342 • Web site: http://www.dhhs.state.nc.us/



South Carolina

Closing the Gap: Addressing Cardiovascular Disease Among African American Communities

Public Health Problem

Every year more than one in four South Carolina residents suffer from some form of cardiovascular disease (CVD), mainly heart disease and stroke, and in 2000, almost 14,000 persons died of CVD. Thirty percent of South Carolinians are African American, and they carry a disproportionate burden of cardiovascular-related deaths and hospitalizations. African Americans in South Carolina also have higher stroke rates than the national average and have a shorter life expectancy than other South Carolinians.

Evidence That Prevention Works

The Institute of Medicine summary report states, "Many social, economic, political, and cultural factors are associated with health and disease for which changes in individual health behaviors alone are not likely to result in improved health and quality of life." Environmental and policy changes, affecting large segments of the population, can affect the physical, social, and economic environment to facilitate better health.

Program Example

In 2002, the South Carolina Cardiovascular Health Program provided funding and training to eight health districts to implement cardiovascular health projects in collaboration with local community partners. Each of the eight districts sponsored activities and training designed to create heart-healthy policies and environmental supports in African American communities. The Palmetto Health District: Promoting Healthy Congregations Project focuses on increasing heart-healthy policy and environmental supports in faith-based organizations. The project is developing a community asset map to identify strengths, assets, and resources within the community; creating a communitywide media campaign (including print and broadcast channels) to increase awareness about high blood pressure and the signs and symptoms of heart disease and stroke; and conducting CVD interventions that create policy and environmental changes to help make members of the church more heart-healthy. Churches and faith organizations select and implement specific policies and environmental strategies appropriate to their needs that address high blood pressure, high cholesterol, tobacco use, physical inactivity, and poor nutrition.

Implications

In South Carolina, African Americans are at an increased risk of developing heart disease and stroke across all age and socioeconomic groups. Efforts to focus on this population through local community partners should result in strong social support for policy and environmental interventions that encourage heart-healthy behaviors.

Contact Information

South Carolina Department of Health and Human Services • Bureau of Community Health
Box 101106 • Columbia, South Carolina 29211
Phone: (803) 898-0267 • Web site: http://www.dhhs.state.sc.us/

Partnering With Community Health Centers to Control High Blood Pressure

Public Health Problem

High blood pressure is a major modifiable risk factor for heart disease and stroke. Although high blood pressure is controllable and detectable, it is a significant problem in the United States, with over 50 million adults suffering from high blood pressure. One in every four adults has high blood pressure and African Americans are at even greater risk, with one in every three adults suffering from high blood pressure.

Evidence That Prevention Works

Altering one's lifestyle by increasing physical activity, reducing dietary salt intake, or taking blood pressure medication has been proven effective in lowering blood pressure. A 5 mm Hg reduction in diastolic blood pressure corresponds to a 21% decrease in coronary heart disease risk. Similarly, illness and death from heart disease and stroke can be reduced when diastolic or systolic blood pressure levels are within the normal range.

Program Example

The Virginia Cardiovascular Health Program supports system enhancements to track blood pressure testing and outcomes at 17 community health centers by developing a database and supporting data entry for high blood pressure patient chart reviews. Patients previously diagnosed with high blood pressure were the focus of the chart reviews. Based on the clinical guidelines adapted from the *Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VI)*, the chart reviews determine whether physicians are adhering to the guidelines for treating patients and whether their high blood pressure is under control. The Virginia Cardiovascular Health Program provides training for community health center practitioners and staff. The training sessions focus on implementing the guidelines for prevention, treatment, and control of high blood pressure. In addition to the training, the Virginia Cardiovascular Health Program is developing a video to be distributed to community health centers for on-site training to improve practioners' ability to take accurate blood pressure measurements.

Implications

This program demonstrates that states should partner with health care organizations, especially community health centers that serve low-income and often high-risk patients, to promote system enhancements, such as providing education and training about *JNC VI* guidelines and *Healthy People 2010* objectives.

Contact Information

Virginia Department of Health • Division of Chronic Disease Prevention and Nutrition
P.O. Box 2448, Room 132 • Richmond, Virginia 23218
Phone: (804) 692-0204 • Web site: http://www.vdh.state.va.us/